

IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

OLLIE GREENE, Individually as the
surviving parent of WYNDELL GREENE,
SR., WILLIAM GREENE, as the
Administrator of the Estate of WYNDELL
GREENE, SR., and MARILYN BURDETTE-
HARDEMAN, Individually and as the
surviving parent of LAKEYSHA GREENE,

Plaintiffs,

v.

TOYOTA MOTOR CORPORATION,
TOYOTA MOTOR ENGINEERING &
MANUFACTURING NORTH AMERICA,
INC., TOYOTA MOTOR SALES USA, INC.
VOLVO GROUP NORTH AMERICA, INC.
VOLVO TRUCKS NORTH AMERICA, a
DIVISION OF VOLVO GROUP NORTH
AMERICAN, LLC, STRICK TRAILERS, LLC,
JOHN FAYARD MOVING & WAREHOUSE,
LLC and DOLPHIN LINE, INC.

Defendants.

CAUSE NUMBER 3:11-cv-0207-N

JURY TRIAL DEMANDED

**DEFENDANT STRICK CORPORATION'S INC'S REPLY TO PLAINTIFFS' 4/7/2014
COMBINED RESPONSE TO STRICK'S MOTION TO EXCLUDE
CERTAIN OPINIONS OF KEITH FRIEDMAN**

INTRODUCTION

This is a reply to Plaintiffs' Combined Response to Strick's Motions as it pertains to
Strick's Motion to Exclude Mr. Friedman's Opinions Regarding Computer Simulations.

[Plaintiffs' Resp, DOC 510]. Strick's Motion and Brief are at Docket No. 391.

I. MR. FRIEDMAN'S FAILURE TO PRODUCE A COMPLETE SET OF HIS SIMULATION FILES CONTINUES AS AN UNRESOLVED PROBLEM

Plaintiffs have still not produced all of the files which comprise the Finite Element Analyses which Mr. Friedman ran. The missing files are necessary to enable Strick's experts to assess the validity of Mr. Friedman's computer simulation work and to enable Strick's counsel to cross-examine Mr. Friedman. When Strick first received discs purporting to contain Mr. Friedman's finite element analyses, Strick's Detroit counsel informed Plaintiffs' counsel of missing files on February 24, 2014. [Ex. A - App. 2-3]. A lengthy exchange of correspondence occurred over whether Strick had received the entire Friedman file. Eventually, Strick received a second production of Mr. Friedman's file, but examination by Strick's experts, engineers working with Dr. Vogler, has revealed the data provided remains incomplete. Strick presumes Plaintiffs' counsel has produced what Mr. Friedman gave him and does not attribute fault to Plaintiffs' counsel for the missing input data. Nevertheless, the second allegedly complete file is still missing critical input data and files which are necessary for analysis and verification of the simulation. In addition, no input, output, avi files or other data was produced for three of the simulated runs (Run 6, Run 7 and Run 8). Without the input data, it is impossible for another expert (or this court) to determine whether the input data is valid (such as coefficients of friction, grade, effects of gravity, vehicular models. Strick has effectively been denied its opportunity to cross-examine Mr. Friedman on potential deficiencies in the computer analyses.

Mr. Friedman's file contained six finite element analyses. Three simulations (Runs 1, 2 and 9) involve the crash of a Ford Explorer (not a Toyota 4Runner) into a trailer. Neither copy of the two simulation data sets produced contain the actual input files which Mr. Friedman utilized to "construct" the computer model of the Explorer or of the Trailer, such as height,

weight, center of gravity, crush resistance, etc. Strick's experts are able to ascertain the input data files are missing because the Friedman Finite Element Analyses can be searched for all files utilized with a tool called LS-DYNA. That tool identifies the specific input files used for the simulation endeavor. [Ex. B - Eby Aff. ¶¶ 4,7. App. 5-6]. Dozens of the input files required to run the simulations are not on either set of the discs produced, a mere sample of which include, but are not limited to:

- * Run1 files:
 - * "explorer.k"
 - * "trailer.inc"
 - * "strick2007underguard_102.inc"
 - * "messag"
- * All files:
 - * "d3shp" files
 - * "d3plot" files
 - * "messag" files

[Ex. B - Eby Aff. ¶¶ 7, 9, 14, App. 6-7].

Several of the disks produced by Mr. Friedman do include a partial compilation file, such as the "full1.k" file included on the disk with Run 1. This particular Run1 file mashes together the characteristics of an Explorer, a trailer, and an underguard, but does not separate them or allow the information to be processed with the LS-DYNA program. [Ex. B - Eby Aff. ¶¶ 7, 11, 12, 13, App. 6-7]. The cobbled-together "full1.k" file is not the actual input files, nor does it contain sufficient input data to enable an assessment of the validity of the input data and

therefore, the validity of computer models. [Ex. B - Eby Aff. ¶¶ 7, 8, App. 6]. One particularly important file missing from every disk produced is the “messag” file which logs errors and potential discrepancies in the simulation. [B. Eby Aff. ¶ 7, App. 6].

The absence of the input data files makes it impossible to determine whether Mr. Friedman’s simulation has produced reliable, repeatable and accurate output. Without this, there is no way for another expert or this Court to determine that any Friedman opinions based upon the simulations satisfy the reliability requirement of Fed. R. Evid. 702. Stated another way, it is not possible to know whether, from the perspective of reliability, the simulations represent “garbage in/garbage out”.

Strick was not able to definitively raise this concerns in its moving brief because of the delay in receipt of the simulations and the time needed for expert examination of the simulation data. Regardless, it is Plaintiffs’ burden to lay the foundation for similarity outside the presence of the jury and prior to admission at trial. *Barnes v General Motors Co.*, 547 F.2d 275, 277 (5th Cir. 1977) (burden is upon the party offering evidence of out-of-court experiments to lay a proper foundation demonstrating a similarity of circumstances and conditions). This includes providing all of the data and parameters used to run the simulation; where the proponent has failed to provide all of the data and parameters used to set up the simulation, the court must presume the simulation is more prejudicial than probative and the simulation may not be shown to a jury. *Apache Corp v Global Santa Fe Drilling Co*, 2012 WL 3263897 (WD La., August 8, 2012) (Proponent of computer simulation must lay foundation for court prior to trial and demonstrate probative value outweighs prejudice outside presence of jury). Strick respectfully submits Plaintiffs cannot do so when all of the data has not been produced. Nor should either

Strick or the Court need to accept Plaintiffs' mere assertion that the foundation has been laid:

Trained experts commonly extrapolate from existing data. But nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered. *Gen Elec Co v Joiner*, 522 US 136, 146 (1997), citing *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1360 (C.A.6), cert. denied, 506 U.S. 826, 113 S.Ct. 84, 121 L.Ed.2d 47 (1992).

The law is clear. Plaintiff has the burden to disclose the complete input data and lay the foundation; they have not done so.

II. AS PRODUCED, THE FRIEDMAN SIMULATION FILES ARE MISLEADING, AND MORE PREJUDICIAL THAN PROBATIVE

The rule for the admission of simulations is well-established:

In order for an experiment of this type to be admissible in evidence, it is not required that all the conditions shall be precisely reproduced, **but they must be so nearly the same in substantial particulars as to afford a fair comparison in respect to the particular issue to which the test is directed.** *Barnes, infra*, at 277.

The problem presented by the use of simulations with dissimilar parameters, such as Mr. Friedman's simulations, is the danger of misleading the members of the jury who may attach exaggerated significance to the test. *Barnes v General Motors Co.*, 547 F.2d 275, 277 (5th Cir. 1977). There is a two-pronged test for the admission of an experiment or simulation: (1) was it conducted under similar conditions and therefore probative; and (2) will the admission of the evidence be confusing to the jury, causing unfair prejudice. *Fisher v RD Werner Co.*, 1 F.3d 1236, 1993 WL 309740 (C.A.5 (Miss.)), citing *Barnes v General Motors Co.*, 547 F.2d 275 (5th Cir. 1977). In *Barnes*, the court found reversible error where it failed to exclude experiments performed on another automobile under significantly different circumstances from those

admittedly existing at the time of the accident. Mr. Friedman's simulations similarly fail *both* prongs of the test.

Mr. Friedman's simulations were not conducted under similar conditions from one "comparative" simulation to the next and are not probative to the issues in this case. The Greene accident involved a Toyota 4Runner. Mr. Friedman ran his simulations using a Ford Explorer of an unknown model, which is heavier, of different dimensions than a 4Runner and of different structure and manufacture. Mr. Friedman simulated a rear end crash into the Explorer and then simulated crass between the crushed rear structure of the Explorer into the rear of a simulated trailer. But an Explorer has an entirely different body structure, weight, etc. from a 4Runner and there is no foundation that the damaged Explorer matches a damaged simulated 4Runner.

Mr. Friedman's simulations are highly prejudicial because he compares one result with another, yet simulates the crashes he wishes to compare under **different** crash conditions. These differences manipulate and dramatize the difference between an impact with a bumper guard intact and one without an intact bumper guard.

Mr. Friedman's simulation Run 1 and Run 2, by way of example, appear to compare two rear impacts of a Ford Explorer into two trailers, set at different heights and set at different conditions. Run 1 appears to be a simulation of a 35 mph impact where the rear bumper guard has been directed to remain intact. The files produced for Run 2, however, contain *no input data whatsoever*. It is impossible to tell the velocity, the rotation, or the configuration of the vehicles. There is simply no meaningful analysis that is possible. The output video shows a Ford Explorer striking the rear of a trailer without an underride guard; additionally, the trailer is elevated four inches off the ground. There is no means of determining, however, how Mr. Friedman

determined the base height of the trailer - how did the load affect the height, etc. We can see, however, despite the missing input files, that the 35mph linear velocity of Run 1 is a much higher speed than the impact of the subject accident. We can further see that the elevation of the trailer and the lack of any underride guard at all in Run 2 is certain to confuse the jury in a case where there most certainly was a guard, albeit not manufactured by Strick. The lack of an underride guard and the elevated trailer in Run 2 combine to show an accident with a dramatically different set of impact points than the subject accident; the result is a much more severe visual demonstration of crush than could have occurred during the subject accident, resulting in an sequence that is enormously inaccurate and unduly prejudicial.

Examining the differences between Run 1 and Run 9, we see that Run 1 used a “fixed” trailer, while Run 9 did not. Not only does this confuse the issue relative to the subject accident, but it also presents the problem (in light of all the missing files) of measuring force transfer, and measuring any consequent crush on the vehicles.

Without the input data, there is no means to evaluate how Run 2 of Mr. Friedman’s simulations is even representative of a Strick trailer. Strick is baffled that anyone would find similarity to the subject accident in a simulation of a Ford SUV striking a non-Strick trailer. But it doesn’t stop there. Because the simulation isn’t based on a real Explorer and a real trailer; instead, the Run 2 simulation alters the physical parameters of the vehicles so that the trailer is taller than a real trailer, significantly changing the impact points. The overall result amounts to a comparison of oranges to apples in which Mr. Friedman has declared that the color red means safe.

CONCLUSION

For all the foregoing reasons, Strick respectfully asks this Court GRANT its Motion.

Respectfully submitted,

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**ATTORNEYS FOR DEFENDANT
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on April 21, 2014, a true and correct copy of the above and foregoing was forwarded to all counsel of record in accordance with the Federal Rules of Civil Procedure.

/S/ Donald H. Dawson, Jr.
DONALD H. DAWSON, JR.